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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/995,473	- 11/28/2001	Graham A. Morehead	018680/00052	3122

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EXAMINER
PROCTOR, JASON SCOTT

ART UNIT	PAPER NUMBER
2123	

DATE MAILED: 03/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/995,473	MOREHEAD ET AL.
	Examiner	Art Unit	
	Jason Proctor	2123	

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-26_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-26_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _28 November 2001_ is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

    1.☐ Certified copies of the priority documents have been received.

    2.☐ Certified copies of the priority documents have been received in Application No. _____.

    3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
    application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-26 have been submitted for examination. Claims 1-26 have been rejected.

Priority

Applicant's claim for priority under 35 U.S.C. § 119(e) to provisional application 60/301,414 filed June 29, 2001 and provisional application 60/314,311 filed August 24, 2001 is acknowledged.

Drawings

1.   The drawings are objected to because they do not have satisfactory reproduction characteristics. See 37 CFR 1.84(l). Specifically, the large arrows of Figs. 2-3 representing "virtual socket" are significantly faded. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each

drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2.   The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims.   Therefore, the database of settings, interface to modify settings, security (passwords, certificates, hardware identification), pinging, service level agreement, network congestion, firing alarms, diagnosing target device problems and inefficiencies, hosting interactive troubleshooting programs, and other limitations of claims 25-26 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an

application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Technology Background

To better facilitate analysis of the state of the art, the Examiner provides the following definitions and references.

Microsoft Computer Dictionary, Fifth Edition, provides the following definitions:

- **remote administration** *n.* The performance of system administration-related tasks via access from another machine in the network.

- **telnet**[1] *n.* A client program that implements the Telnet protocol. **2.** A protocol in the TCP/IP suite that enables individuals to log on to and use a remote computer as if they were sitting at a terminal directly connected to the machine.

- **terminal** *n.* **1.** In networking, a device consisting of a video adapter, a monitor, and a keyboard. The adapter and monitor and, sometimes, the keyboard are typically combined in a single unit. A terminal does little or no computer processing on its own; instead, it is connected to a computer with a communications link over a cable. Terminals are used primarily in multiuser systems and today are not often found on single-user personal computers. *See also* dumb terminal, smart terminal, terminal emulation.

- **terminal emulation** *n.* The imitation of a terminal by using software that conforms to a standard, such as the ANSI standard for terminal emulation. Terminal-emulation software is used to make a microcomputer act as if it were a particular type of terminal while it is communicating with another computer, such as a mainframe. *See also* VT-52, VT-100, VT-200.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. § 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3.   Claims 1-9 and 18-21 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74

(Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86

USPQ 481 (Bd. App. 1949). In the present instance, claims 1 and 18 recite the broad

recitation "entering commands on the computer", and the claims also recite "entering

commands on the computer via the menus or the shortcuts" which is the narrower

statement of the range/limitation.

In the interest of compact prosecution, the Examiner interprets these claims

according to the narrower limitations in order to apply prior art to the claims. See *Ex*

parte Ionescu, 222 USPQ 537 (Bd. Pat. App. & Inter. 1984).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 1-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over US

Patent No. 6,292,181 to Banerjee et al. (Banerjee) in view of "Virtual Network

Computing" by T. Richardson, Q. Stafford-Fraser, K. Wood, and A. Hopper

(Richardson).

Banerjee teaches a system to control a host computer using a hand-held

interface device (handheld computer) (See abstract). Although Banerjee teaches the

use of a wireless communication link, this is acknowledged as a means to provide

mobility not found in prior art systems that used a serial link (column 2, lines 15-21).

Banerjee also teaches that the mobile device (handheld computer) communicates with a host computer, transmitting user input and receiving the subsequent graphical response (column 2, lines 41-53). In more detail, Banerjee teaches that the host computer runs an application program under the Windows operating system (column 10, lines 9-13) and the output from the application program (display data) is transmitted to the viewer (column 10, lines 61-64; *viewer* is the display of the handheld computer, column 6, lines 35-50).

Richardson teaches the concept of Virtual Network Computing, where "server machines supply not only applications and data but also an entire desktop environment that can be accessed from any Internet-connected machine using a simple *software* NC (network computer)" (page 33, paragraph 1). The VNC protocol is totally independent of operating system, windowing system, and applications (page 34, paragraph 1). Richardson also teaches the possibility of building a VNC link for a wider range of devices, going so far as to teach using a USB or RS232 link (serial port) (page 37, "Future Work"). Richardson shows a client computer using VNC to connect to and control a computer that has no keyboard or monitor ("headless" or "stand alone" server) (page 35, Figure 1).

Other limitations of claims 1-9 would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention as extremely well known in the art, such as instant messaging applications being widely available (dating to at least 1991 with the linux utility *ytalk*, that being based on the much older UNIX utility *talk*), command line interface software, and the use of terminal editors *vi* and *emacs* in a

telnet or VNC setting. Concepts such as remote administration, telnet, and terminal emulation are all extremely well known in the art.

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to combine the teachings of Banerjee regarding a handheld computer to remotely control a host computer with the teachings of Richardson regarding VNC, also in combination with his own knowledge of the particular art, to arrive at a handheld computing VNC client capable of supporting well known software for the host computer to achieve a more marketable product, greater flexibility, and improved mobility. Motivation to do so is found in the prior art, as noted above in Banerjee (regarding mobility) and the entirety of Richardson.

Additionally, all of the claimed software components, exemplified by ssh, UNIX commands, virtual sockets, et cetera, perform exactly as expected based upon their well known and established uses in the prior art. Making this software portable by using it on a handheld computer in communication with a host or server computer is an extremely well known concept in the prior art, exemplified by the use of laptop computers and telnet, remote administration, or in combination with VNC. To this end, Applicant neither discloses nor claim improvements in these software tools but rather claims their use through a remote administration, telnet, or VNC type connection.

5.   Regarding claims 25 and 26, these claims recite a method similar to the methods of claims 1-24 with features such as "enforcing security", "hosting interactive troubleshooting programs along with Frequently Asked Questions and Online Help

applications", network monitoring tools, and other concepts or applications that are extremely well known in the prior art. As an example, claim 25 recites the step of "pinging any targeted device". The UNIX utility PING was created in 1983 (See "The Story of the PING Program") specifically for use as a network tool. As further evidence, Applicant neither discloses nor claim to have invented or improved "monitoring all targeted devices according to a specification or service level agreement" (claim 24), but rather claims to be performing this step through a remote administration, telnet, or VNC type connection.

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to support and use software tools that were well known in the art when developing and/or using a remote administration, telnet, or VNC type computer system. Motivation to do so could be found in the knowledge of a person of ordinary skill in the art.

Conclusion

Art considered pertinent by the examiner but not applied has been cited on form PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Proctor whose telephone number is (571) 272-3713. The examiner can normally be reached on 8:30 am-4:30 pm M-F.
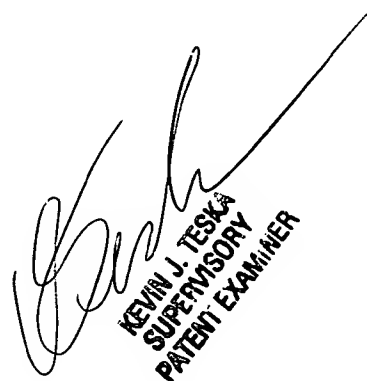
If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Kevin J Teska can be reached on (571) 272-3716. The fax phone number

for the organization where this application or proceeding is assigned is (571) 273-3713.

Any inquiry of a general nature or relating to the status of this application should

be directed to the TC 2100 Group receptionist: 571-272-2100. Information regarding

the status of an application may be obtained from the Patent Application Information

Retrieval (PAIR) system. Status information for published applications may be obtained

from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the

PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to

the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-

9197 (toll-free).

Jason Proctor
Examiner
Art Unit 2123

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